MINISTRY OF TRANSPORTATION

KINSOL TRESTLE

RISK ASSOCIATED WITH LEAVING THE TRESTLE IN ITS PRESENT CONDITION FOR 18 MONTHS PRIOR TO DEMOLITION

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Victoria, B.C.
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Our File: 826

Ministry of Transportation
3rd Floor – 2100 Labieux Road
Nanaimo, BC V9T 6E9
Attention: Martin Menzel, P.Eng.

Re: Kinsol Trestle:
Risk associated with leaving the trestle in its present condition for 18 months prior to demolition

We have been asked by the Ministry of Transportation to assess the risks associated with leaving the Kinsol timber trestle in its present condition for approximately 18 months. We did address this problem in our previous report on the Kinsol Trestle and have attached a copy of our "Risks" section from that report to this letter report.

As mentioned in our previous report there are two major threats to the overall stability of the trestle namely: Hurricane force winds or a significant seismic event. The obvious conclusion is that the longer the trestle remains in place the more chance it has of collapsing due to either of these threats. However in all likelihood it will survive for another 18 months.

The other risks identified with leaving the trestle in place were: individual members or sections of the trestle falling; damage by fire (either from lightning strikes or arson); vandalism.

The best way to address these lesser threats would be to fence off the trestle using chain link fencing topped with barbed wire.

We have obtained a quote from Tower Fence Products Ltd. for providing 900' of 6' high fencing topped with 3 rows of barbed wire and one gate at each end.

Installed Cost: $ 18,921.00 + GST.

Yours very truly,

Per:
J.G.McCall, P.Eng.

6. RISKS ASSOCIATED WITH LEAVING EXISTING STRUCTURE IN ITS PRESENT CONDITION & DISCUSS ANY MITIGATING PROCEDURES

The biggest threat to the Kinsol trestle would be if it were to experience hurricane force winds or if we had a significant seismic event in the lower half of Vancouver Island. Should the structure experience such forces the danger would not only be to anyone in the immediate vicinity of the structure being killed but if the Howe Trusses spanning the Koksilah River were destroyed in the process.

There is no way to actually analyse the structure for the aforementioned forces as everything would be a guess as to the extent of the rot in the existing timber members. As previously pointed out the trestle is in very poor condition with some or all of the following defects evident at each bent:

- Many posts exhibit advanced decay and in some instances the ends don't exist;
- Most sills exhibit advance decay;
- Most of the bracing members are checked, split, decayed and/or broken – especially on the outside faces of the trestle;
- The areas around the many fasteners show evidence of decay to varying degrees;
- Some timber mudsills (north end especially) are decayed and rotten.

Other than a major event as mentioned above there are still risks associated with leaving the trestle in its present condition for the following reasons:

- Individual members could fall at any time on anyone unfortunate enough to be underneath the trestle at the time;
- There is still the danger from fire destroying the trestle as happened in the Okanagan in Myra Canyon. There is no access to the trestle to fight a fire and it could only be tackled safely from the air. This structure has already experienced fire damage in three locations.
- It is much easier for vandals to damage members that are already showing signs of distress with very poor rotted connections;

The only way to mitigate this would be to repair the most damaged members. This process would be very costly and there would be a great element of risk on the part of the contractor undertaking such an enterprise. By hammering and manoeuvring the damaged members from the structure during the repair process one might precipitate a section of trestle from being dislodged above the workmen and creating a falling hazard. This would be a huge undertaking and in our opinion will only be postponing the inevitable.